Michael Kiesling
1000 Union Street #207
San Francisco, CA 94133

October 26, 2007

Chair Kopp, Members and Staff
California High Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814

Re: Comments on DEIR/EIS Bay Area – Central Valley High Speed Train Program

Dear Chair Kopp, Members and Staff:

Thanks for all your work on California's high speed rail project. We are close, and within ten years, we'll have something working, but it remains to be seen what that is. I030-1

I know that many other groups and individuals are offering their comments on a myriad of issues. I will refrain from going over many of them, concentrating on the few outstanding physical alignment/civil engineering issues that I believe make enough of a difference in the project that they are worthy of investigation or clarification in the DEIR/EIS to ensure that the superior option, in all respects, is presented to the Authority's Board for approval. I030-2

Many people are frustrated by the politics of the design process. I hope most of them, like me, can separate the politics from the project so that the state can move forward with this project.

Please note that higher resolution versions of the images imbedded in this document are available at the urls included.

Choice of Alignmment

From all the data presented in the decade of studies leading to the DEIR/EIS, and utilizing common sense, the Altamont alignment, consisting of the Tracy Downtown, Patterson Pass, Livermore UP, variations on the UP alignment through Pleasantion and Niles Canyon, and the Fremont Central Park section and Dumbarton Tunnel make up the best option for connecting the Bay Area to the Central Valley, along with a variation on the I-880 and Trimble alignments to San Jose. I030-3

According to your data, Altamont is faster than either Pacheco alignment between all stations in the state, with the exception of San Jose and Gilroy. It serves the Tri-Valley and Contra Costa cities at the expense of not serving Gilroy. It parallels the congested I-580/680 freeways between the Bay Area and Central Valley. It consumes less farmland and traverses significantly less undeveloped open space and farmland. Its only failure seems to be a slower travel time from stations south of Merced. This travel time can safely be described as insignificant, as it is a matter of ten minutes or less. Less than the I030-4

time it will take you to read this document, sip a latte or walk from your car to security at most any airport. To decide the future of the state's railway network on such an insignificant factor, weighed against the benefits of the alternative is both a clear and sad trumping of the facts so clearly laid out in document.

I030-4 Cont.

The political process that originated from the use of the word "spur" in relation to San Jose service in your predecessor's planning documents has led to too much effort in a very negative direction, and documentable perversions of the Authority's planning process. This DEIR/EIS has addressed most all the issues dropped in the previous document, and is a good document. From the merits outlined in this DEIR/EIS, and by using common sense, Altamont is the only logical choice.

Dumbarton/Caltrain Joint Use

I030-5

The DEIR/S fails to adequately consider joint-use of the Dumbarton Corridor to minimize cost and environmental impacts. The DEIR/EIS should clearly outline the opportunities and challenges with operating in across the Dumbarton in a joint-use with the Dumbarton rail service.

The Dumbarton Corridor is expected to be in operation in 2014. The line from Redwood Junction to Newark Junction will be built to Caltrain standards and operated and dispatched by Caltrain. Cost escalation and funding constraints have caused this project to become phased, with the first phase to enter operation between Newark and Redwood City.

The CHSRA expects to run in mixed-traffic with Caltrain to gain access to San Francisco. This should extend to the Dumbarton line between Newark and Redwood City as a preliminary option to decrease project costs and environmental impacts. Once headways and ridership increase, a tunnel should be constructed at Dumbarton, and the existing railway crossing, including bridges and earthworks, should be removed.

CHSRA assumes a station in either Newark or Fremont. This station would serve as the East Bay stop for the Dumbarton service. On the West Bay side, a set of passing sidings could be built at the site of the proposed Chilco station, to allow local trains to stop while regional and express trains pass through unimpeded.

The decision to implement high speed rail will occur prior to the construction phase of the Dumbarton project. Construction documents for the Dumbarton project should be expanded to include signaling and electrification compatible with joint Caltrain-HSR operation.

By evaluating the joint use of not only the Caltrain line but also that of Dumbarton crossing the CHSRA has the opportunity to reduce initial project costs significantly while reducing the environmental impacts of constructing another bridge in the corridor. By deferring the construction of a tunnel at Dumbarton until the HSR is operating and turning a profit, initial economic resources can be used elsewhere in the network.

Even if the initial crossing utilizes the contemplated single-track embankment and

bridges through the Don Edwards refuge, the five mile single-track section through the sensitive environment could easily handle 6 trains per hour in each direction, greater than the combined service levels envisioned for either HSR service to San Francisco and the proposed Dumbarton service.

I030-5 Cont.

Tracy Elevated Station Alternatives

I030-6

It seems that the design of the Downtown Tracy Station could be improved if the intersecting UPRR Mococo line was depressed beneath the proposed HSR line and station, with the HSR line and station constructed at grade. The current cross section, shown in Section AP-24, places the HSR and platforms at approximately +30' with a pedestrian undercrossning beneath the adjacent UPRR at approximately -15'. This results in a 45' elevation change from the passageway to the platforms and a long and expensive elevated station and approaches.

Depressing the UPRR would require approximately 1/2 mile long transition sections to bring the conventional line beneath the HSR line and station, following a 1% grade. The UPRR would begin its descent after crossing North Tracy Boulevard and be fully depressed to cross under Central Avenue adjacent to West Sixth Street. Platforms for passenger service on the line would be provided in this area. The line would then cross under the HSR line and begin to climb back to grade. The line would be at grade again just east of South MacArthur Drive.

Central Avenue would be depressed under the HSR line, descending after passing over the depressed UPRR line.

This arrangement should reduce the cost of the station by 1/2 to 2/3. This significant cost savings should be tested then reflected in the final EIR/S.

Why was a surface option, as described above, not included in the options?

I030-7

Fremont Central Park Alignment / Newark Station

I030-8

Why was the decision made to bring the Central Park alignment in Fremont from a cut and cover tunnel to an aerial structure in the middle of a residential area? The cost of extending the cut and cover another two kilometers to bring it to the west side of I-880 would be roughly $70 million, the difference between the cost of an aerial structure and a cut and cover tunnel.

Proposing an elevated alignment bisecting a residential neighborhood where there is no existing roadway or railway is likely to generate significant opposition.

As drawn, the Newark Station's location cannot accommodate a 4-track section, to allow for stopping and through tracks. Why was this location, under-sized, in the midst of a built-up industrial area, chosen for the station location? There is no significant public transit connections to the station. AC Transit's line 235 passes the location only five times (total) each weekday. The industrial development surrounding the site limits the

I030-9

feasibility of attracting transit oriented development to the station site.

I030-9 Cont.

Finally, what is the actual station configuration? The text on the Newark Station Fact Sheet says it is an at-grade station but the section shown indicates it's an elevated station. The configuration can affect the cost of the station by a factor of at least 3, if one compares the cost projected for at-grade stations against those for elevated stations.

I030-10

Shinn Street Station

I030-11

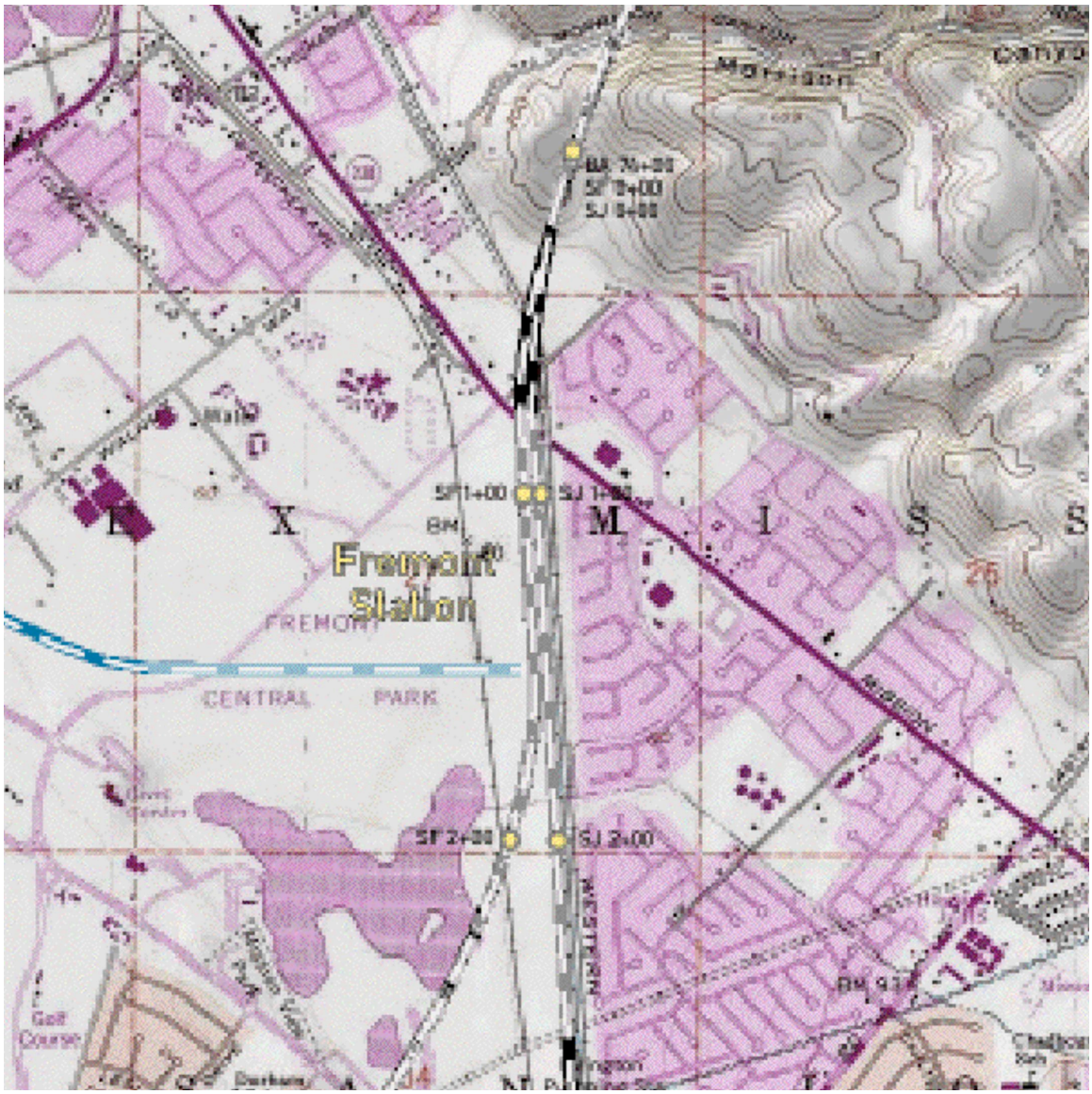
The Shinn Station location is accessed by a single narrow residential street that crosses the Union Pacific mainline, which carries both Amtrak Capitols and ACE trains, at grade. The station site has no transit service and is constrained by rail and industrial development and Alameda Creek and established residential neighborhoods. The existing rail right-of-way is not wide enough to accommodate the 180' station section shown on the Shinn Street Fact Sheet. There is no indication that a connection to BART, less than 1/4 mile west of the station site, is contemplated.

Why is this important intermodal connection overlooked? Wouldn't a connection to BART increase ridership and meet the goal of forging intermodal links? What potential for meaningful joint development is possible on this constrained site? Is the site even capable of accommodating a station?

Fremont Mission Boulevard Station

I030-12

Why was no station common to both San Jose and Peninsula trains considered in the Fremont area? A site near the intersection of Mission Boulevard and Stevenson Boulevard, a present commercial use, could provide the location for the station. See: http://arch21.org/BARegRail.dir/BayRailDetailMaps.dir/6-Fremont.gif



Building two stations in the Fremont area, one for San Jose trains and one for Peninsula trains, is duplicative and wasteful. I030-12 Cont.

Grasslands North Alignment I030-13

What is the benefit of this option? It traverses more open and agricultural land than the other Pacheco alignment, traverses a more developed area where it requires a junction with the N-S Central Valley line (requiring more homes to be taken for construction) and adds distance and travel time to all trips between stations Fresno and south and the Bay Area.

Placing the Merced station on the Southern California-Bay Area mainline seems a very weak justification for this alignment option. Table 3.2-7, Forecasted Daily Boardings, from the March 23, 2001 Alignment/Station Screening Evaluation Methodology report,

shows Merced with only 514 boardings, third lowest, just above Los Banos and Tulare/Hanford. Most stations have in the thousands, if not tens of thousands. Updated boarding information is unlikely to change relative differences in station boardings.

The GEA seems to lack any significant benefit over the Henry Miller Pacheco Alignment, so it should be dropped from further study.

I030-13 Cont.

San Jose Mineta Airport Access

I congratulate the Authority for adding an option to bring the proposed HSR alignment down Trimble Road in San Jose. San Jose's decision to upzone the area of North First Street and Trimble Road to encourage the development of dense commercial uses in the area would be well supported by a future regional rail (not HSR) stop in the area.

The Authority's consultants did overlook or reject the most significant portion of the Trimble alignment presented to them, accessible at:
http://arch21.org/BARegRail.dir/BayRailDetailMaps.dir/3-SanJose.gif

I030-14

The ability to serve a second Bay Area airport directly, with an even better connection than possible at SFO, seems a strong reason to include the SJC alignment in the DEIR/EIS. The alignment, as drawn, is compatible with SJC's proposed expansion. Concerns about this station being too close to the Diridon San Jose station should be mollified by the fact that there are many locations on regularly-scheduled high speed service with station spacing near terminal stations. Many German ICE trains make closely-spaced stops, including 4km on train 1650 between Dresden and Dresden Neustadt, 5km on ICE 600 between Basel and Basel Bad stations, 5km between Hamburg-Altona and Hamburg-Dammtor then 1 (!) km to Hamburg main station on ICE 1517.

I030-14
Cont.

An airport stop in San Jose also provides passengers arriving by auto a location close to freeways and which provides ample parking. A second airport station in the Bay Area gives travelers greater choice. The alignment option serving Mineta San Jose Airport

should be included in the DEIR/EIS, as it is on either an initial Altamont alignment, or potential San Jose-Oakland line.

I030-14 Cont.

I-880 UP/BART Alignment

I030-15

The single option of an elevated alignment for the HSR above the median of I-880 between Fremont and San Jose overlooks the opportunity to utilize the UP/future BART right of way. The Trimble alignment provides an exit from the UP right of way prior to its congested and developed entry into downtown San Jose. While the ability to utilize the UP/BART right of way partially to San Jose, transitioning to I-880 offers little benefit, the UP/BART to Trimble alignment appears superior to the I-880/Trimble alignment.

The joint rail right of way between Stevenson Boulevard in Fremont and Abel Street in Milpitas has sufficient width to accommodate BART, HSR and Union Pacific facilities. South of Abel Street, the proposed BART alignment follows the UP alignment to the east, while HSR would follow the historic SP right of way until transitioning to an aerial structure in the median of Montague Expressway.

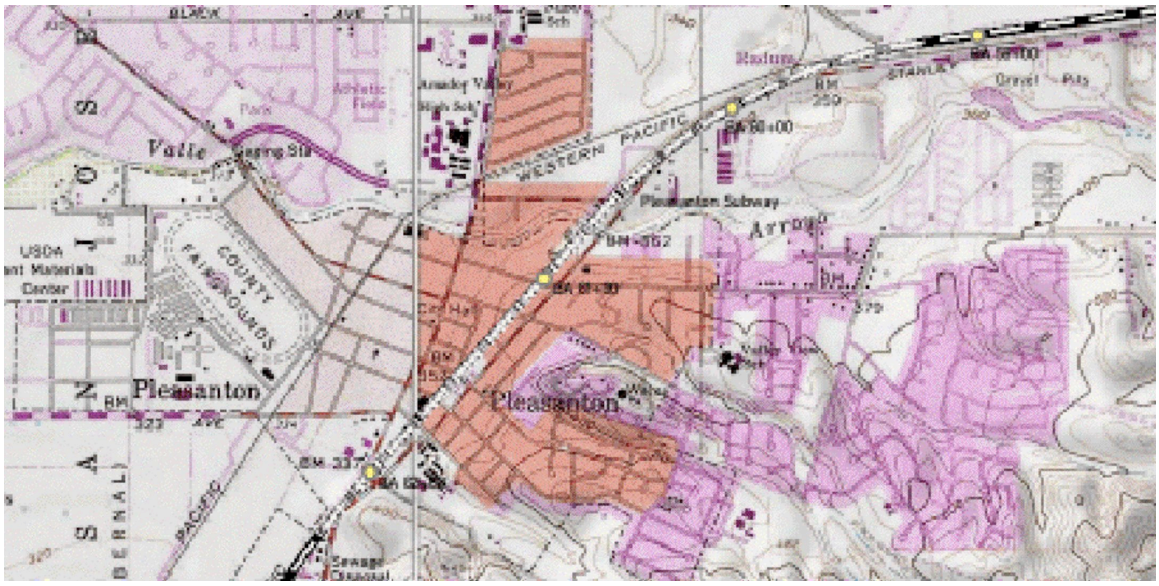
Utilizing the BART/UP right of way would allow the HSR to take advantage of the grade separations there, existing and planned, rather than building a complex elevated structure in the median of the I-880 freeway.

Pleasanton Alignment

I030-16

The DEIR/EIS should consider an underground alignment on the former Southern Pacific alignment through downtown Pleasanton, examining the possibility of a three-track configuration, relocating the existing UP line into the cut and cover structure.

The former SP right of way is 100 feet wide, more than necessary for a three track cut and cover excavation. The crossing of Arroyo Valle, just east of downtown Pleasanton, will require a deep excavation, but the benefit to the town of removing the UP tracks from their right of way, combined with the straighter alignment for HSR should make this option worthy of inclusion in the DEIR/EIS. See:
http://arch21.org/BARegRail.dir/BayRailDetailMaps.dir/4-AmadorValley.gif



I-680/580 Alignment

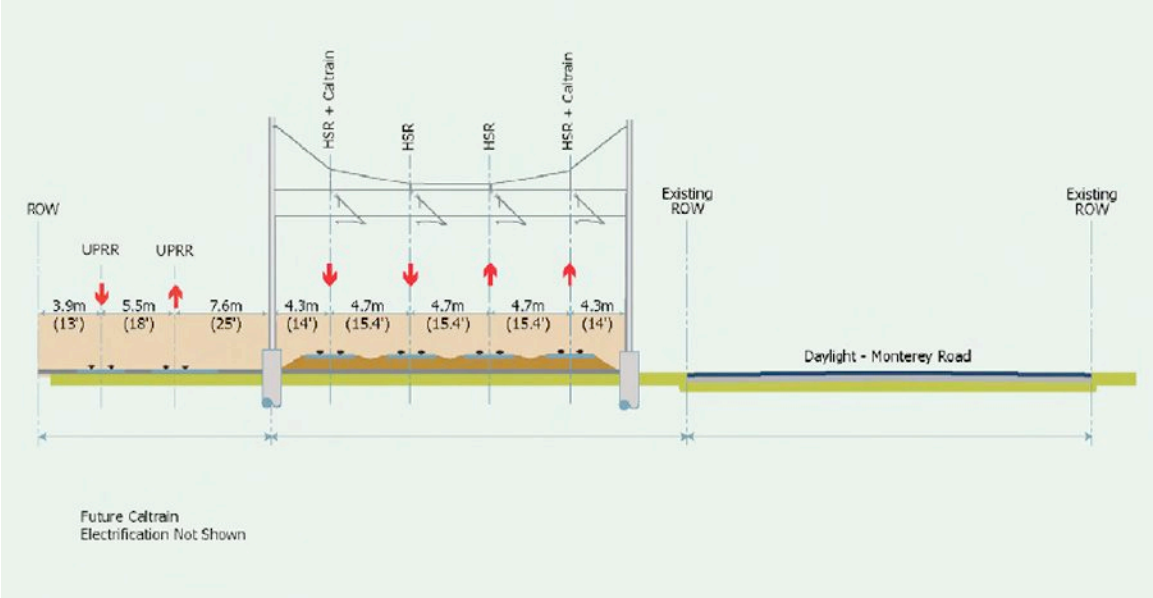
I030-17

This alignment should be dropped, due to the sharp curvature entering and leaving the I-680 median, the difficulty of building above the median of freeways and BART, and the visual and sonic impacts of an elevated railway.

HSR Adjacent to Monterey Highway

I030-18

The combined right of way of Monterey Highway and the Union Pacific in South San Jose does not appear to be wide enough to accommodate the proposed cross section shown in Figure PP-6. see: http://www.cahighspeedrail.ca.gov/public_notice/pdf/DEIR-EIS/Appendices/2E/3-SanJose_to_CentralValley_a.pdf



Please provide a sample of various right of way widths along Monterey Highway between Capitol Expressway and Bernal Road, taken at each intersection. Also provide all dimensions on Figure PP-6, including that for Monterey Highway, including landscaping and sidewalks.

I030-18 Cont.

Operations

I030-19

The Authority needs to offer an operating plan for both alternatives that bases train service on demand (rather than equal) service to the dual or triple terminals in the Bay Area and offer an operating plan that considers the severe capacity constraints at the San Francisco Transbay Teminal as it relates to accommodation of terminating all LA and Sacramento to Bay area trains under a Pacheco alternative. Can the Transbay Terminal handle the service levels on HSR is all trains to the Bay Area terminate there, or will some trains need to be terminated before reaching San Francisco?

Also, the Authority needs to discuss in the DEIR/EIR the following operating assumptions:

I030-20

> Operating costs are based on trainset-kms and number of operators. HSR to SF is projected by the CHSRA to have about double the demand of the LA link to SJ.
>
> Let's consider an HSR schedule that provides an equal number of arrivals and departures to SF and SJ, using twinned-trainsets (two trains coupled together) for the SF train and single trains for SJ.

The CHSRA's ridership studies show a demand of about 19.5m trips per year for the Bay Area stations, or 32,500 boardings a day. Demand is roughly split 2:1 between Peninsula and South Bay stations. Assuming 400-person trains, or 800-person twinned trains, an equal number of

I030-21

trains could depart from each Bay Area terminal, under an Altamont scheme: Peninsula trains would be twinned, and South Bay trains would be single.

I030-21
Cont.

Assuming 60% capacity, or 240 persons/train,

32,500 / 0.6 = 54,166 seats needed

54,166 seats needed / 400 seats per train = approx. **136 trains**

this would generate a demand for about 46 departures/day from each terminus. Trains originating in San Francisco would be twinned, single trains would serve the South Bay, for a total of 136 trainsets. (Twinned train = two trainsets coupled as one train)

136 trains / 3 trainsets = approx. **46 train departures each day**

from each Bay Area terminus

If a southern alignment into the Bay Area was chosen, the demand would require about 68 twinned trains/day to the Bay Area,

54,166 seats/ 800 seats per twinned train = 67.7 twinned trains

or 75% of the total number of train departures/arrivals as in the Altamont scheme, but still 136 trainsets.

Los Angeles to San Francisco via a southern alignment (assumed Pacheco) is about 670km. Los Angeles to San Francisco via Altamont is about 677km. Los Angeles to San Jose is about 632km via Altamont.

In the case of an Altamont alignment, there would be 92 trainsets operating to San Francisco each day, for 124,568 train-km round trip (arrivals from LA plus departures to LA).

SF via Altamont = 677km x 46 departures x 2 trainsets/train x 2 (roundtrip)

= 124,568 train-km

San Jose would account for 46 trains, or 58,144 train-km. Together, this results in a 182,712 train-km/day.

SJ via Altamont = 632km x 46 departures x 1 trainset/train x 2 (roundtrip)

= 58,144 train-km

Total train-km/day for Altamont = SF + SJ = **182,712 train-km**

I030-21
Cont.

For a southern alignment, there would be 68 twinned-trains operating, 182,240 train-km/day.

SF/SJ via Pacheco = 670km x 68 departures x 2 trainset/train x 2

(roundtrip) = **182,240 train-km**

Total train-km/day for Pacheco = **182,240 train-km**

Note that this yields a difference of less than 0.3% in total train-km to provide an equal number of departures and arrivals to each of the Bay Area's terminals.

Assuming that the trains operate 18 hours/day, **this would be a departure or arrival of a HSR train every 8 minutes**, a significant addition to Peninsula corridor rail traffic under the Pacheco routing.

68 trains / 18 hours = 3.77 train/hr = 1 departure every 15.8 minutes

These HSR trains would pass through Palo Alto and Sunnyvale without stopping.

With the Altamont routing, the trains would depart from San Jose every 23.5 minutes. The trains would not pass through Palo Alto or Sunnyvale or create attendant noise impacts in those cities without providing a direct transportation benefit.

46 trains / 18 hours = 2.56 train/hr = 1 departure every 23.5 minutes

The difference in departure frequencies between these scenarios is not significant from a traveler's point of view given the distances traveled. Just as a traveler doesn't base a decision to fly from SFO instead of from SJC to LA based on the fact that the frequency of flights from SFO to LA is somewhat greater, neither will a traveler decide against riding HSR because of a slight difference in frequency or travel time.

HSR trains would travel more frequently through Fremont under this

scenario, as opposed to not at all. Fremont has the advantage that it would connect the HSR line to the BART system. BART could also connect to HSR in the Amador Valley.

I030-21 Cont.

Los Banos Light Maintenance/Storage Facility

I030-22

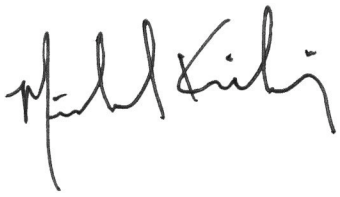
How was Los Banos determined to be the best location to service Bay Area trains, when it's over 200km from the terminal in San Francisco? How does the Los Banos location meet the requirement that the light maintenance facility be within a 5-minute trip of the terminal? What criteria was used to determine this location? Are there no other locations closer to San Francisco than Los Banos that could serve as a light maintenance facility? What are the impacts of the Los Banos facility on the surrounding environment, including wetlands?

The DEIR/EIS needs to identify a maintenance facility site in the Bay Area that meets it's own criteria, a 5-minute trip from the terminal station.

Thank you for your years of diligent work towards bringing high speed rail to California. I look forward to seeing the first shovel of earth turned for this project.

I030-23

Sincerely-



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